



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,650	03/15/2001	Fumiyoshi Urano	910094R1	8670

7590

09/14/2004

James E Armstrong IV  
Armstrong Westerman Hattori McLeland & Naughton  
1725 K Street NW  
Suite 1000  
Washington, DC 20006

EXAMINER

STOCKTON, LAURA

ART UNIT

PAPER NUMBER

1626

DATE MAILED: 09/14/2004

62

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/810,650

Applicant(s)

URANO ET AL.

Examiner

Laura L. Stockton, Ph.D.

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-27 is/are pending in the application.
- 4a) Of the above claim(s) 15-27 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____                                                            | 6) <input type="checkbox"/> Other: _____                                    |

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 2

## DETAILED ACTION

Claims 7-27 are pending in the application.

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on August 4, 2004 has been entered.

### *Election/Restrictions*

Newly submitted claims 15-27 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: newly added claims 15-27 are directed to methods of use. Compounds were in the original patented claims and only

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 3

compounds have been under examination in this reissue application since the first Office Action dated February 22, 2002 {Paper No. 39}.

Inventions of Group I (compounds and compositions of claims 7-14) and Group II (methods of use in claims 15-27) are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the process for using the product as claimed can be practiced with another materially different product.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. See 37 CFR 1.176(b) and MPEP § 1450.

Accordingly, claims 15-27 are withdrawn from consideration as being directed to a non-elected invention. and MPEP § 821.03.

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 4

It is suggested that in order to advance prosecution, the non-elected subject matter be canceled when responding to this Office Action.

Newly added claims 12-14 have been interpreted as composition claims eventhough no other ingredient is stated in the reduced light exposure energy photosensitive resist material. Therefore, based on this interpretation of claims 12-14, claims 12-14 are being examined along with the compound claims {e.g., instant claims 7-11}.

### *Claim Objections*

Claims 10 and 11 are objected to for being substantial duplicates of claims 8 and 9, respectively. When two claims in an application are duplicates, or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 5

one claim to reject the other as being a substantial duplicate of the allowed claim. M.P.E.P. 706.03(k).

### *Response to Arguments*

In Applicants' arguments filed August 4, 2004, Applicants requested to defer canceling claims 10 and 11 until claims 8 and 9 are considered allowable.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C.

112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 8 and 9 are rejected under 35 U.S.C. 112, first paragraph, the description requirements therein.

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 6

The introduction of claim changes which involve narrowing the claims by introducing elements or limitations which are not supported by the as-filed disclosure is a violation of the written disclosure requirement of 35 U.S.C. 112, first paragraph. M.P.E.P. 2163.04 and 2163.05. As stated in *Fujikawa v. Wattansasin*, 93 F.3d 1559, 39 USPQ2D 1985 (Fed. Cir. 1996), "a laundry list disclosure of every possible moiety does not constitute a written description of every species in a genus because it would not reasonably lead those skilled in the art to any particular species.

Claims 8 and 9 are rejected under 35 U.S.C. 112, first paragraph, the description therein, for reasons essentially given in the Office Action dated September 6, 2002 {Paper No. 44}, pages 2 and 3. More specifically, in claim 8, the expression "wherein R<sup>1</sup> is a cyclic alkyl group in which the alkyl group is hexyl; and R<sup>2</sup> is a cyclic alkyl group in which the alkyl group is hexyl" lacks description in the original specification and the original claims. However, there is description in the instant

Application Number: 09/810,650

Page 7

Control Number: 90/004,812

Art Unit: 1626

specification of U.S. Pat. 5,216,135 (column 2, line 52) for  
bis(cyclohexylsulfonyl)diazomethane.

Specifically, in claim 9, the expression “ where  $R^1$  is a branched alkyl group in which the alkyl group is butyl; and  $R^2$  is a branched alkyl group in which the alkyl group is butyl” lacks description in the original specification and the original claims. However, there is description in the instant specification of U.S. Pat. 5,216,135 (column 2, lines 55 and 56) for bis(*tert*-butylsulfonyl)diazomethane and bis(*sec*-butylsulfonyl)-diazomethane.

### *Response to Arguments*

Applicants' arguments filed August 4, 2004 have been fully considered. Applicants argued that claims 8 and 9 are supported by the written description in the patent and the priority document as explained on pages 4-5 of the response filed on February 4, 2004 (Paper Nos. 57 & 58). As stated in the previous Office Action (dated June 4, 2004 – Paper



Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 8

No. 59), Applicants arguments were not persuasive for the following reasons.

Applicants argue that claim 8 is a longer way than claim 10 of writing bis(cyclohexylsulfonyl)diazomethane. Therefore, Applicants argue that claim 8 is supported in the instant specification because claims 8 and 10 define bis(cyclohexylsulfonyl)diazomethane. Applicants argue that claim 9 is a longer way than claim 11 of writing bis(*tert*-butylsulfonyl)diazomethane. Therefore, Applicants argue that claim 9 is supported in the instant specification because claims 9 and 11 define bis(*tert*-butylsulfonyl)diazomethane.

Applicants' arguments have been considered but have not been found persuasive. The language found in claims 8 and 9 is found in the Japanese priority document. Such language is not found in U.S. Pat. 5,216,135. Therefore, claims 8 and 9 lack written description as such.

Applicants argue that claim 10 is not rejected under 35 USC\*112, first paragraph because there is clear support in US Patent 5,216,135. Applicants further argue that the Examiner has indicated that claim 10 is

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 9

a substantial duplicate of claim 8. Applicants argue the statements made in the Declaration filed December 12, 2002 by Dr. Albert Tockman, Ph.D., a skilled chemist.

Applicants' arguments have been considered but have not been found persuasive. In instant claim 10, the  $R^1$  and  $R^2$  variables are defined as cyclohexyl. The instant specification discloses that  $R^1$  and  $R^2$  can represent cyclohexyl (column 2, line 39 and line 47) and prepares a species in which both  $R^1$  and  $R^2$  are cyclohexyl (column 2, line 52). Therefore, claim 10 is adequately defined in the instant specification.

The Declaration by Dr. Albert Tockman, Ph.D. dated December 12, 2002 has been considered. The Declaration offers Declarant's opinion that the subject matter of claims 8 and 9 under subject areas of U.S. Pat. 5,216,135 and/or the Japanese priority document by pointing out expressions and terms in these documents that are inclusive of terms in the instant claims. Declarant then concludes that the inventors were in possession of the compounds of claims 8 and 9. However, Declarant has not shown persuasively where description is found, in the instant

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 10

specification, for the subject matter of claims 8 and 9. The Declarant has only pointed out terms here and there and then conclude that Applicants are in possession of the compounds of claims 8 and 9. Declarant has not shown where there is written description for the claimed subject matter. It is noted that Declarant indicates that claim 8 is drawn to compounds wherein R<sup>1</sup> is cyclohexyl and R<sup>2</sup> is cyclohexyl (item 8 of the Declaration filed December 20, 2002).

Applicants do not have description for the subject matter of claims 8 and 9 in the instant specification. Therefore, the issue as to description in the Japanese priority document has no barring on the 35 U.S.C. 112, first paragraph, rejection herein.

Claims 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 11

Claims 12-14 are indefinite since an effective amount of the diazodisulfone compound of formula (I) is not stated in the claims.

It is unclear if claims 12-14 are directed to compounds or compositions, since no other ingredient is stated in the "reduced light exposure energy photosensitive resist material", and therefore, claims 12-14 are indefinite.

Claim 14 does not conform to M.P.E.P. 608.01(m) since each claim must end with a period.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 12

Claims 8-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Pawlowski et al. {U.S. Pat. 5,338,641}.

Pawlowski et al. disclose compounds which are embraced by the instant claimed invention and therefore, anticipate the instant claimed invention. See the following table.

Applicants' Compounds	Pawlowski et al.'s Compounds	Instant Claims Anticipated
R <sup>1</sup> and R <sup>2</sup> are each cyclohexyl	Bis(cyclohexylsulfonyl)diazomethane (column 4, line 46)	Claims 8 and 10-14
R <sup>1</sup> and R <sup>2</sup> are each branched butyl (e.g., <i>iso</i> -butyl)	Bis (2-methylpropylsulfonyl)diazomethane (column 4, line 33)	Claims 9 and 11-14
R <sup>1</sup> and R <sup>2</sup> are each branched butyl (e.g., <i>sec</i> -butyl)	Bis(1-methylpropylsulfonyl)diazomethane (column 4, line 32)	Claims 9 and 11-14

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 13

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: •

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawlowski et al. {U.S. Pat. 5,338,641}.

*Determination of the scope and content of the prior art (MPEP §2141.01)*

Applicants claim diazodisulfones. Pawlowski et al. teach diazodisulfones {e.g.,  $\alpha,\alpha$ -bis(sulfonyl)diazomethanes} which are either structurally the same as (see above 102 rejection) or structurally similar to the instant claimed compounds. See in the reference, for example, wherein R represents butyl (including positional isomers – e.g., *tert*-butyl) or cyclohexyl {column 3, lines 8-15, 40-49, 66-68; column 4, lines 1-2; and especially the compounds in column 4, lines 32-34}.

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 14

*Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)*

The difference between some of the compounds of the prior art and the compounds instantly claimed is that the instant claimed compounds are generically described in Pawlowski et al.

*Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)*

The indiscriminate selection of "some" among "many" is *prima facie* obvious, *In re Lemin*, 141 USPQ 814 (1964). The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (e.g., forms a strong acid on exposure to actinic radiation).

One skilled in the art would thus be motivated to prepare compounds embraced by the reference genus to arrive at the instant claimed compounds with the expectation of obtaining additional beneficial compounds which would be useful in forming a strong acid on exposure to actinic radiation. The instant claimed invention would have

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 15

been suggested to one skilled in the art and therefore, the instant claimed invention would have been obvious to one skilled in the art.

### *Response to Arguments*

Applicants' arguments filed August 4, 2004 have been fully considered. Applicants argued that claims 8-11 are not anticipated or rendered obvious by Pawlowski et al. as explained on pages 6-9 of the response filed on February 4, 2004 (Paper Nos. 57 & 58). As stated in the previous Office Action (dated June 4, 2004 – Paper No. 59), Applicants arguments were not persuasive for the following reasons.

Applicants argue that while the exact IUPAC names are not found in priority document JP 2-019614, dated January 30, 1990, the compounds of claims 8-11 can be found in JP 2-019614. Applicants cite the Federal Circuit guidance in the unpublished decision, *In re Wako Pure Chemical Industries*, 00-1139 (Fed. Cir. 2001). Applicants argue that at the top of page 8, lines 1-4 of *In re Wako Pure Chemical Industries*, 00-139, the court states: "Wako would be the same case as Driscoll" if Urano had



Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 16

claimed the entire C<sub>1-10</sub> straight-chain, branched or cyclic alkyl genus in category one of the Markush groups listed in the Japanese application. However, Urano claimed only a subset of the first category disclosed in the Japanese application.” Applicants argue that instant claims 8-11 no longer claim a subset of a Markush group but only one of the members of a Markush group. Applicants cite page 14 of the Japanese priority document where alleged support is found for the instant claimed invention. Applicants then argue that the rejections under 35 U.S.C. §§ 102(e) and 103 should be rendered moot since Applicants alleged support for the instant claimed invention is found in the Japanese priority document which was filed January 30, 1990, making Pawlowski et al. a non-prior art reference.

All of Applicants’ arguments have been considered but have not been found persuasive. In the decision of *In re Wako Pure Chemical Industries, 00-139*, in comparing Driscoll with the Reexam application, the court states: “this case differs from the present case in that the focus was on only one particular moiety, and there was a need to select only

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 17

one group, i.e., a piperidine ring, from among disclosed compounds. In the present case, in contrast, the focus is on two moieties, R<sup>1</sup> and R<sup>2</sup>" (bottom of page 8 and the top of page 9).

Applicants argue Japanese priority document 02-019614 filed January 30, 1990 predates the earliest filing date of Pawlowski et al. and therefore, Pawlowski et al. is not prior art against claims 8-11.

In response, the instant claimed subject matter of claims 8-11 is not adequately described in the Japanese priority document. Note the decision by the Board of Appeals and Interferences on September 24, 1999 {Paper No. 27} affirming the Examiner, and especially claims 2 and 3, in Reexam 90/004812 (which has been merged with the instant application) and the Judgment on February 1, 2001 by the United States Court of Appeals for the Federal Circuit {Paper No. 32} – identified by Applicants as *In re Wako Pure Chemical Industries, 00-139*. Claim 3 in the Reexam listed the specific specie bis(cyclohexylsulfonyl)diazomethane, bis(tert-butylsulfonyl)diazomethane and bis(sec-butylsulfonyl)diazo-

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 18

methane (column 14, lines 50, 53 and 54), which correspond to claimed subject matter of instant claims 8-11.

The Board decided that claims 2 and 3 lacked adequate written descriptive support from the Japanese priority document. The Board stated, "there is no more guidance in the Japanese application to select a slightly smaller subgenus than there is to select any other subgenus ." (page 10, second full paragraph of the Decision). It is noted that the subject matter of claims 2 and 3 was not appealed to the CAFC, at Applicants' choosing, and that for the subject matter appealed, claims 1 and 4-6, the position of the Examiner was affirmed. In applying the rationale given by the Board and the CAFC to instant claims, there is no guidance in the disclosure in the Japanese priority document to select the subject matter as claimed in instant claims 8-11. Further, the Examiner cannot ignore a CAFC Judgment (Reexam 90/004812) or a Decision by the Board of Appeals and Interferences (Reexam 90/004812) that relate to any claimed subject matter.

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 19

Applicants' argue that new claims 12-14 are novel, unobvious and supported in the examples in Applicants' patent and in the disclosure of the priority document. Applicants argue that nowhere in the prior art is there disclosed using a reduced light exposure energy.

All of Applicants' arguments have been considered but have not been found persuasive. Newly added claims 12-14 are directed to compositions not methods of use or a process of making. Further, newly added claims 12-14 do not contain any other ingredient except for a compound of formula I. A compound and its properties are inseparable. *In re Papesch*, 137 USPQ 43 (CCPA 1963). As detailed above, the compounds of formula I are anticipated and found obvious over Pawlowski et al. Also detailed in the decision by the Board of Appeals and Interferences on September 24, 1999 {Paper No. 27} in the merged Reexam 90/004812 affirming the Examiner, that the instant claimed invention lacks adequate written descriptive support in the Japanese priority document. Therefore, newly added claims 12-14 are not novel and are obvious over Pawlowski et al.

Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 20

*Allowable Subject Matter*

Claim 7 is free of the art of record for reasons already of record in Paper No. 39, pages 4-5. Therefore, claim 7 is allowed.

The original patent, or a statement as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents **must** be submitted in response to this Office action.

Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, which will be strictly enforced.

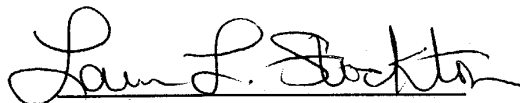
Application Number: 09/810,650  
Control Number: 90/004,812  
Art Unit: 1626

Page 21

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura L. Stockton whose telephone number is (571) 272-0710. The examiner can normally be reached on Monday-Friday from 6:15 am to 2:45 pm. If the examiner is out of the Office, the examiner's supervisor, Joseph McKane, can be reached on (571) 272-0699.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The Official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



Laura L. Stockton, Ph.D.  
Patent Examiner  
Art Unit 1626, Group 1620  
Technology Center 1600

September 9, 2004